

LINEAR PERFLUOROPOLYETHERS HAVING AN IMPROVED THERMOOXIDATIVE STABILITY

ABSTRACT

Linear perfluoropolyethers of formula: $T\text{-O(CF}_2\text{O)}_n (\text{CF}_2\text{CF}_2\text{O)}_m (\text{CF}_2\text{CF}_2\text{CF}_2\text{O)}_r (\text{CF}_2\text{CF}_2\text{CF}_2\text{CF}_2\text{O)}_s - T_1 \quad \text{(I)}$ wherein n, m, r, s are integers such that the polymer number average molecular weight is comprised between 700 and 100,000 and the n/(n+m+r+s) ratio ranges from 0.05 to 0.40,

and respective preparation process by addition of a peroxidic perfluoropolyether of formula (III):

$$T_4 - O(CF_2O)_{n'}(CF_2CF_2O)_{m'}(O)_h - T_5$$
 (III)

having a PO from 1.8 to 4, to a perfluoropolyether oil preheated at a temperature comprised between 150°C and 250°C and subsequent exhaustive fluorination of the obtained compound.